SATPRO_Home_mode

SATPRO HOME Operation Modes

The SATPRO HOME can be obtained through various means:

- No Home
- Manual
- MAV
- GPS
- GPS fix

This selection establishes the operation mode of the SATPRO.

No Home:

This mode can be used to control the SAT’s position externally, for example, with a PC connected via UDP, sending position commands in degrees. For example:

- DX 327
- DY 4

The SATPRO does not internally calculate or orient its position to the vehicle in this mode. Mavlink must be deselected in this mode. It is also useful for testing the SATPRO with the XLRS_SATPRO app and the main window commands like DX or DY.

Manual:

This mode is used to set a fixed position when the SATPRO is in a fixed installation. For a fixed installation, you could use the local GPS in GPS fix mode. This mode can also be used if the local GPS does not detect satellites or in case of a failure. You can manually enter the ORG position in decimal

degrees format, with altitude in meters.

You can use Google Earth, select decimal degrees, and simply copy the position of the desired point and paste it into the ORG command text fields. To prevent command readings from overwriting ORG, when you click inside the text field, it will change color to yellow, allowing you to type or paste the new origin or Home position of the SATPRO.

You can also enter the ORG position remotely via UDP or TCP from a PC. This allows positioning the SATPRO far (70km or more) from the Ground Control Station by connecting it via the internet or WIFI depending on the distances.

MAV:

This mode is used when you want to obtain the ORG or the Home of the SATPRO from the vehicle when starting the mission and the vehicle is very close (1 to 4 meters) to the SATPRO. Depending on the type of missions, this method can sometimes be interesting.

GPS:

This mode is for when the SATPRO is mounted on a moving vehicle (van, adapted pickup, boat, etc.), and it moves, so SATPRO will automatically calculate to orient the antennas to the vehicle. This mode requires the use of a Magnetometer for vehicles in motion to reorient the antenna if the vehicle is moving. Not yet available. Please consult.

It can be used if the SATPRO is not moving and is on the tripod, but for this, the GPS fix mode is more recommended.

GPS fix:

This mode is for when the SATPRO is on a fixed tripod, regardless of the initial distance from the vehicle. For example, when SATPRO is in a fixed position, and a UAV takes off 10km away. In this mode, when the local GPS data is valid,

the HOME will be automatically set and fixed.

If you want to change the ORG position later, you can do so at any time by switching to GPS and then back to GPS fix. Be careful! Do this only if the mission allows it and does not risk the vehicle’s radio coverage.

Direct commands:

SATPRO can receive direct commands via COM, UDP or TCP.
For SATPRO to remotely update the Home (ORG) of the SATPRO you can use a port that decodes Mavlink (Prop = MAV) or send direct commands (Prop = CMD) through the port.

To change the position of ORG or SATPRO HOME without using MAVLINK:

ORG 395625331 -3388666 28

Command, Latitude, longitude, altitude in meters

Latitude and Longitude (Long in Decimal Degrees)

You can test this text command directly in the App console (Commands OFF), or see how the SATPRO is generated and responds if you enter the ORG value (HOME=Manual) it will turn yellow and press enter.

Notes:

Important: Positions in decimal degrees format, compatible google Earth, with altitude in meters.

If you are unsure which HOME mode to choose, by default, you can use **GPS fix**, which is suitable for most situations.

In all modes, SATPRO at 0º should be oriented to the north.